

2013-1130

**UNITED STATES COURT OF APPEALS FOR THE
FEDERAL CIRCUIT**

RICHARD A. WILLIAMSON,
Trustee for At Home Bondholders Liquidating Trust,

Plaintiff-Appellant,

v.

CITRIX ONLINE, LLC, CITRIX SYSTEMS, INC., MICROSOFT
CORPORATION, and ADOBE SYSTEMS INC.,

Defendants-Appellees,

and

WEBEX COMMUNICATIONS, INC., CISCO WEBEX, LLC, and CISCO
SYSTEMS, INC.,

Defendants-Appellees,

and

INTERNATIONAL BUSINESS MACHINES CORPORATION,

Defendant-Appellee.

Appeal from the United States District Court for the Central District of California
in Case No. 11-CV-2409, Judge A. Howard Matz.

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2. The name of the real party in interested represented by me is:

Citrix Online, LLC, Citrix Systems, Inc., Microsoft Corporation, and Adobe Systems Inc.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

There is no such corporation

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STATEMENT OF RELATED CASES

There have been no previous appeals in this action.

STATEMENT OF THE CASE

At Home Corporation filed for bankruptcy in 2001. The bankruptcy court created the At Home Corporation Bondholders' Liquidating Trust ("the Trust") as one of three trusts to dispose of or otherwise monetize At Home Corporation's assets. The Trust claims ownership of U.S. Patent No. 6,155,840 ("the '840 Patent"), titled "System and Method For Distributed Learning."

On March 22, 2011, the Trust, acting through its trustee, Richard A. Williamson, sued Defendants-Appellees Citrix Online, LLC, Citrix Systems, Inc., Microsoft Corporation, Adobe Systems Inc., Webex Communications, Inc., Cisco Webex, LLC, Cisco System Inc., and International Business Machines Corporation, in the Central District of California. The suit alleged infringement of the '840 Patent. All 24 claims were asserted.

After full briefing and a hearing, the district court issued its claim construction order on September 4, 2012. [A8-34.] Williamson moved for reconsideration, which the district court denied. [A6976-79; A37-40.] Williamson makes no argument on appeal challenging denial of the motion for reconsideration.

In view of the district court's claim constructions, the parties stipulated to non-infringement of independent Claims 1 and 17 and their respective dependent claims. The parties also stipulated that none of the Defendants is liable for infringement of the remaining independent claim, Claim 8, or its dependent claims,

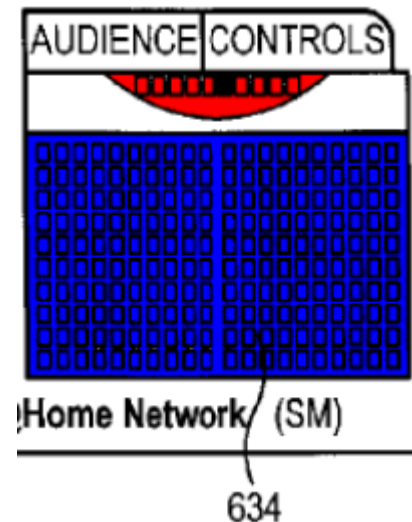
because the district court held those claims invalid as indefinite under 35 U.S.C. § 112. The district court entered a stipulated final judgment in Defendants’ - Appellees’ favor on November 26, 2012. [A1-7.] Williamson filed a notice of appeal on December 26, 2012. [A7391-92.]

STATEMENT OF FACTS

I. THE ’840 PATENT.

The ’840 Patent describes a specific system and method for “distributed learning.” [A59 (Abstract); A67 (1:6-10).] As the background of the ’840 Patent explains, “distributed,” or “distance,” learning was not new when the application was filed—hardware and “specialized software programs” existed that could electronically connect presenters to remotely located audience members. [*Id.* (1:38-55).] The patentee, however, alleged that there was a problem with the interfaces of these existing systems: “these [prior art] solutions require teachers and audience members to engage in unusual behavior that detracts from the learning experience,” including that “audience members must devote time to learning the communications tools instead of learning the intended skills.” [*Id.* (1:56-58, 1:62-64).] The patentee explained that he wanted to provide “the benefits of classroom interaction without the detrimental effects of complicated hardware or software.” [*Id.* (2:3-6).]

In furtherance of this objective, the patentee adopted an approach that users would find intuitively familiar: a map depicting an actual classroom that, like a prototypical classroom, included a distinct area for presenters (e.g., a podium) and a distinct area for students (e.g., seats). The parties agree that the particular display of a podium identifying presenters (shaded in red) and rows and columns identifying audience members (shaded in blue), arranged in a classic “seating chart” format and labeled with reference number 634 in Figure 6 (shown at right), is the ’840 Patent’s only depiction of the claimed “graphical display representative of a classroom,” and thus embodies such a map.



[Williamson Brief at 11 (“[W]indow 634 in Figure 6 illustrates one such graphical display representative of a classroom. . . .”); *see also* A68-71 (3:11-13, 8:64-66, 9:5-7).] The ’840 Patent further describes this graphical display as providing “a classroom- or auditorium-like metaphor.” [A67 (2:10-14); *Id.* (2:35-37); A69 (5:65-6:1).] Consistent with Figure 6, the specification describes this classroom metaphor as “provid[ing] the presenter and audience member computer systems *with a map of the virtual classroom, and identifies the location of the presenters and audience members on the map.*” [*Id.* (6:10-13) (emphasis added); *see also* A67 (2:37-39).] The “classroom metaphor” shows a “podium and rows of seats.”

[A59 (Abstract).] In the map shown above, “[o]ne or more presenters typically ‘stand’ at the podium [location highlighted in red] while the audience members ‘sit’ in the seats [location highlighted in blue].” [A69 (6:8-9).]

By providing the familiar notion of a classroom as its graphical interface, the claimed distributed learning system sought to “enhance the distributed learning experience, because it allows remotely located presenters and audience members to engage in a *traditional classroom* discussion. Skills and behaviors learned by the participants in other learning environments, *including real classrooms*, are immediately applicable to the environment provided by the system.” [A71 (10:13-19) (emphasis added).]

To connect presenters and audience members, the ’840 Patent adopted a client-server architecture. The server is referenced as a “distributed learning server” or “DLS.” [A68 (3:59-4:1).] The DLS includes several “functional units”: the “classroom environment module,” the “streaming data module,” and the “distributed learning control module.” [A69 (5:34-37); A62 (Figure 3).] The ’840 Patent states that these “modules” can be implemented in either hardware or software. [A68 (4:40-43).]

The function of the classroom environment module (as recited in dependent Claim 9) is “providing a representation of a classroom to the presenter and audience member computer systems.” [A72 (Claim 9, ll.65-67).] As discussed

above, the specification explains that this entails providing “a classroom metaphor having a podium and rows of seats to the presenter and audience computer systems.” [A59 (Abstract).]

The function of the streaming data module is “providing the streaming data from the remote streaming data source selected with the content selection control to the presenter and audience member computer systems.” [A72 (Claim 8, ll.52-55).]

Finally, the function of the distributed learning control module is “receiving communications transmitted between the presenter and the audience member computer systems and [] relaying the communications to an intended receiving computer system and [] coordinating the operation of the streaming data module.” [Id. (Claim 8, ll.56-61).]

The relevant claims are the following:

1. A method of conducting distributed learning among a plurality of computer systems coupled to a network, the method comprising the steps of:
 - providing instructions to a first computer system coupled to the network for:
 - creating a graphical display representative of a classroom;***
 - creating a graphical display illustrating controls for selecting first and second data streams;
 - creating a first window for displaying the first selected data stream; and
 - creating a second window for displaying the second selected data stream, wherein the first and second windows are displayed simultaneously; and

providing instructions to a second computer system coupled to the network for:

creating a graphical display representative of the classroom;

creating a third window for displaying the first selected data stream; and

creating a fourth window for displaying the second selected data stream, wherein the third and fourth windows are displayed simultaneously.

8. A system for conducting distributed learning among a plurality of computer systems coupled to a network, the system comprising:

- a presenter computer system of the plurality of computer systems coupled to the network and comprising:
 - a content selection control for defining at least one remote streaming data source and for selecting one of the remote streaming data sources for viewing; and
 - a presenter streaming data viewer for displaying data produced by the selected remote streaming data source;
- an audience member computer system of the plurality of computer systems and coupled to the presenter computer system via the network, the audience member computer system comprising:
 - an audience member streaming data viewer for displaying the data produced by the selected remote streaming data source; and
- a distributed learning server remote from the presenter and audience member computer systems of the plurality of computer systems and coupled to the presenter computer system and the audience member computer system via the network and comprising:
 - a streaming data module for providing the streaming data from the remote streaming data source selected with the content selection control to the presenter and audience member computer systems; and
 - a distributed learning control module for receiving communications transmitted between the presenter and the audience member computer systems and for relaying the communications to an intended receiving***

computer system and for coordinating the operation of the streaming data module.

17. A distributed learning server for controlling a presenter computer system and an audience member computer system coupled to the distributed learning server via a network, the distributed learning server comprising:

a module for providing a first graphical display on the presenter computer system, the first graphical display comprising:

- a first presenter content selection control for selecting a first source of streaming content representative of graphical information;
- a first presenter content display region for displaying the graphical information represented by the streaming content from the first selected source;
- a second presenter content selection control for selecting a second source of streaming content representative of graphical information; and
- a second presenter content display region for displaying the graphical information represented by the streaming content from the second selected source, wherein the first and second presenter content display regions are adapted to display simultaneously; and

a classroom region for representing the audience member computer system coupled to the distributed learning server; and

- a module for providing a second graphical display on the audience member computer system, the second graphical display comprising:
 - a first audience member content display region for displaying the graphical information represented by the streaming content from the first source selected by the content selection control; and
 - a second audience member content display region for displaying the graphical information represented by the streaming content from the second source selected by the content selection control, wherein the first and second audience member content display regions are adapted to display simultaneously.

[A71-72 (emphasis added).]

II. THE DISTRICT COURT CLAIM CONSTRUCTION PROCEEDINGS.

Before the *Markman* hearing, each side filed opening, supplemental, and reply claim construction briefs. [A573-603; A657-97; A1348-61; A1362-73; A1403-21; A1466-85.] Williamson also submitted a declaration from his expert, Dr. Shukri Souri, [A621-56], and defendants submitted deposition admissions of Dr. Souri. [A1378-92.] Each side presented oral argument and submitted a set of slides summarizing its presentation. [A1517-81; A1750-906.] During the hearing, the Court questioned whether Williamson had submitted all of his evidence and arguments regarding whether certain terms, including the “distributed learning control module for . . .” limitation in Claim 8, were governed by 35 U.S.C. § 112, ¶ 6, and, if so, the identity of any alleged corresponding structure recited in the specification. [A6823-24 (9:3-10:17).] Williamson confirmed that he would stand on the arguments and evidence presented in his opening brief. [*Id.*; *see also* A11.]

A. The District Court’s Construction of the Graphical Display of a Classroom Limitations in Claims 1 and 17.

The district court construed the terms:

- “graphical display representative of a classroom” in independent claim 1, and

- “first graphical display comprising . . . a classroom region,” in independent claim 17,

to mean, respectively:

- “a pictorial map illustrating an at least partially virtual space in which participants can interact, and that identifies the presenter(s) and the audience member(s) by their locations on the map,” and
- “first graphical display comprising: . . . a display region for a pictorial map illustrating an at least partially virtual space in which participants can interact, and that identifies the presenter(s) and the audience member(s) by their locations on the map.”

[A24-25.] The district court recognized that “the specification shows that the patentee intended only one type of graphical display of this ‘partially virtual’ classroom—a display that included a map.” [A23.] As the district court explained:

[T]he specification consistently describes the graphical representation of a classroom only as a “map” of a classroom. The detailed description explains that the invention provides “a classroom- or auditorium-like metaphor.” (’840 patent, col. 5:66-67). The abstract explains that this “metaphor” involves a depiction of “a podium and row of seats.” Similarly, the summary of the invention explains that “[t]he classroom metaphor preferably provides a map of the classroom showing the relative relationship among presenters and audience members.” (’840 patent, col. 2:25-39). In addition, in the detailed description, one embodiment is described as providing:

“a virtual room having a ‘podium’ and ‘rows of seats.’ One or more presenters typically ‘stand’ at the podium while audience members ‘sit’ in the seats. The classroom

environment module . . . provides . . . a map of the virtual classroom, and identifies the locations of the presenters and audience members on the map.”

(’840 patent, col. 6:8-13.) Furthermore, Figure 6, which contains the only example of a graphical representation of a classroom also includes a map-like grid (Label 634), described as a “seating chart” (’840 patent, col. 9:6), that indicates audience and presenter locations.

[A22-23.] The district court rejected Williamson’s contention “that the classroom *must* allow audience members to interact with both the presenter and other audience members” because “the claims and specification do not contain this limit.” [A23-24.]

B. The District Court’s Construction of the Distributed Learning Control Module Limitation in Claim 8.

The district court held that the term beginning with “a distributed learning control module for . . .,” as used in independent Claim 8, does not connote sufficient structure to avoid means-plus-function construction under § 112, ¶ 6.

[A31.] After reviewing applicable law in light of both the intrinsic and extrinsic evidence, the district court found that there was “no evidence . . . that the[] name[] [distributed learning control module] connote[s] well understood structures in the computer technology field.” [A32.] The district court identified corresponding structure in the specification for two of the three functions performed by the “distributed learning control module,” but with respect to the final function—“coordinating the operation of the streaming data module”—the district court

found that there was no corresponding structure, and therefore held the claim term indefinite. [A32-33.]

C. The District Court's Denial of Williamson's Motion for Reconsideration.

Williamson moved for reconsideration of the district court's claim construction order. [A6976-79.] In conjunction with the motion, Williamson filed a second declaration from Dr. Sourì. [A7001-7009.] With respect to Claim 8, the motion did not seek reconsideration of the conclusion that § 112, ¶ 6, applied, but argued only that "the specification for the 'distributed learning control module' provides sufficient structure to one skilled in the art." [A6995.] The district court found that the reconsideration motion presented no change in the law, no new evidence that could not have been previously known through reasonable diligence, and no showing of a failure to consider facts previously before the court. [A37-40.] In accordance with the applicable local rules, the district court denied the motion for reconsideration, [*id.*], and Williamson makes no argument on appeal challenging that decision.

III. THE JUDGMENT OF NON-INFRINGEMENT.

The accused software products allow for communication over the Internet, but they do not use a "classroom" or "auditorium" metaphor. Instead, as shown in Williamson's opening brief, [Williamson Br. at 18], Defendants'-Appellees' respective accused products merely identify attendees to a particular

communication session using a textual participant list. These products do not use a “map” or any identification of presenters and audience members by their locations on a map.

Accordingly, Williamson stipulated that Defendants-Appellees do not infringe claims 1 and 17 and their respective dependent claims because “none of the Defendants’ accused products include ‘a pictorial map illustrating an at least partially virtual space in which participants can interact, and that identifies the presenter(s) and audience member(s) by their locations on the map.’” [A7373-74.] The stipulation, together with the indefiniteness determination that invalidated Claim 8, resolved all of Plaintiff’s claims against Defendants-Appellees. The district court entered a stipulated final judgment in favor of Defendants-Appellees on November 26, 2012. [A1-7.]

SUMMARY OF THE ARGUMENT

There are two claim construction issues raised in Williamson’s appeal. In both instances, the district court’s claim constructions should be affirmed.

First, this Court’s precedent requires affirmance of the district court’s construction of the claim terms “graphical display representative of a classroom” and “graphical display comprising . . . a classroom region.” These claim terms undisputedly have no plain and ordinary meaning, and also are not expressly defined in the specification. They therefore must be construed in view of the ’840 Patent specification’s teachings. *See, e.g., Goldenberg v. Cytogen, Inc.*, 373 F.3d

1158, 1164-65 (Fed. Cir. 2004) (“Where a claim term has no ordinary and customary meaning, a court must resort to the remaining intrinsic evidence—the written description and the prosecution history—to obtain the meaning of that term.”); *Honeywell Int’l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 991 (Fed. Cir. 2007) (“Without a customary meaning of a term within the art, the specification usually supplies the best context for deciphering claim meaning.”).

The district court’s constructions correctly reflect functional aspects of a “classroom” as well as how a “classroom” is graphically displayed to a user. For example, the ’840 Patent explains that “‘classroom’ refers to an at least partially virtual space in which participants can interact.” [A69 (6:4-6).] Accordingly, the district court’s claim construction includes verbatim the language “an at least partially virtual space in which participants can interact.” [A24-25.] The ’840 Patent also explains how such a “space” is represented in a graphical display to intuitively mimic an actual classroom in which teachers and students are distinguishable by their respective locations. The only graphical depiction of a classroom shown in the ’840 Patent is element 634 in Figure 6, which shows a pictorial map as a seating chart that identifies the presenters and audience members by their locations on the map – presenters on top at the podium, and audience on the bottom in seats. [A65.] Likewise, immediately after explaining the “virtual” nature of the space, the ’840 Patent explains: “[o]ne or more presenters typically

‘stand’ at the podium while the audience members ‘sit’ in the seats.” [A69 (6:8-9).] To represent these essential characteristics of a graphical representation of a classroom, and to facilitate interaction between participants, the ’840 Patent teaches exclusively a pictorial “map of the virtual classroom, and identifies the locations of the presenters and audience members on the map.” [*See, e.g., Id.* (6:10-14); *see also, e.g.,* A59 (Abstract) (“The classroom environment module provides a classroom metaphor having a podium and rows of seats. . .”).]

The ’840 Patent specification also distinguishes a “graphical representation of the classroom” from a “textual” “list of participants,” [*see* A68-71 (3:14-18, 9:24-27, 9:56-59) (describing the presentation/feedback region 710, which “displays textual information” and has a “list of participants”)], which is the feature found in all of the accused products. [*See* Williamson Br. at 18.]

The district court’s construction of these terms aligns with the specification’s consistent and exclusive description of the terms “graphical display representative of a classroom” and “graphical display . . . comprising . . . a classroom region.” Because these constructions are correct under this Court’s precedent, the judgment of no infringement should be affirmed.

The second claim construction dispute on appeal, the district court’s determination that the term “a distributed learning control module

for . . . coordinating the operation of the streaming data module” is indefinite, is also correct as a matter of law.

First, the district court correctly determined that the term is governed by § 112, ¶ 6. This Court has repeatedly held that generic “nonce” words such as “means,” “mechanism,” “element,” “device,” and “module,” do not connote structure. This is especially true in the computer science context where, as here, the term “module” is generic and fails to connote any specific algorithm for implementing a claimed function. The intrinsic evidence reveals that the “distributed learning control module” is nothing more than what the ’840 Patent calls it: a “functional unit.” It is depicted as a black box, and described only in terms of its function.

Second, although the ’840 Patent seeks to reap the benefits of functional claiming under § 112, ¶ 6, the patentee did not pay the statutorily required price by disclosing corresponding structure for the “coordinating” function performed by the “distributed learning control module.” The specification discloses no algorithm that is clearly linked to the claimed function. At most, the specification recites either purely functional language or presents a set of results to be obtained. It fails to disclose anything resembling a step-by-step or other algorithmic procedure for performing the claimed function. The passages and screenshots that Williamson relies upon fail to satisfy § 112, ¶ 6, not only because they do not disclose any

algorithms, but also because they are linked to *other* functions recited in the claims, not the “coordinating” function found lacking by the district court.

Williamson also misstates the record regarding expert testimony. Contrary to Williamson’s assertions, the district court did consider this evidence. As a legal matter, however, expert testimony cannot bridge the gap when a specification lacks any disclosure of corresponding structure. *See, e.g., Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318 (Fed. Cir. 2012); *Aristocrat Techs. Austl. PTY Ltd. v. Int’l Game Tech.*, 521 F. 3d 1328, 1337 (Fed. Cir. 2008); *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1302 (Fed. Cir. 2005). Because there is no disclosure of corresponding structure in the specification, the district court properly concluded that this term is indefinite, thus invalidating Claim 8 and its dependent claims.

Because governing law as applied to the record supports the district court’s judgment, Defendants-Appellees respectfully request that this Court affirm that judgment.

ARGUMENT

I. STANDARD OF REVIEW.

Under current law, this Court reviews claim construction *de novo*. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-55 (Fed. Cir. 1998) (en banc). The same standard applies to whether a limitation should be regarded as a means-plus-function limitation, which is also a matter of claim construction. *Lighting World,*

Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1358 (Fed. Cir. 2004). A determination that a claim is invalid for failure to disclose corresponding structure for a means-plus-function limitation is likewise a legal conclusion subject to *de novo* review. *Noah Sys.*, 675 F.3d at 1311.

This Court recently granted rehearing *en banc* to consider whether *Cybor* should be overruled, as well as the degree to which a district court's claim construction ruling is entitled to deference. *See Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, Nos. 2012-1014, 2012-1015 (Fed. Cir. Mar. 15, 2013). Should the Court change the law regarding claim construction review, Defendants-Appellees preserve all available rights to present additional, responsive arguments.

II. THE DISTRICT COURT CORRECTLY CONSTRUED THE “GRAPHICAL DISPLAY REPRESENTATIVE OF A CLASSROOM” AND “GRAPHICAL DISPLAY COMPRISING . . . A CLASSROOM REGION” LIMITATIONS.

A. The Disputed Claim Terms Have No Plain and Ordinary Meaning and Are Not Expressly Defined in the Specification.

“Where a claim term has no ordinary and customary meaning, a court must resort to the remaining intrinsic evidence—the written description and the prosecution history—to obtain the meaning of that term.” *See Goldenberg*, 373 F.3d at 1164-65; *Honeywell*, 488 F.3d at 991 (“Without a customary meaning of a term within the art, the specification usually supplies the best context for deciphering claim meaning.”); *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383

F.3d 1295, 1300 (Fed. Cir. 2004) (the claim term “group key” “lack[ed] an accepted meaning in the art” and therefore “we construe [it] only as broadly as provided for by the patent itself.”) (*citing J.T. Eaton & Co., Inc. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1570 (Fed. Cir. 1997)); *MyMail, Ltd. v. Am. Online, Inc.*, 476 F.3d 1372, 1374 (Fed. Cir. 2007) (“the term NSP is a coined term, without a meaning apart from the patent. . . . We therefore look to the specification to determine what the NSP must do when establishing that communication link.”).

Here, the parties agree that the terms “graphical display representative of a classroom” and “first graphical display comprising . . . a classroom region” do not have a plain and ordinary meaning to a person skilled in the art. The sole inventor of the ’840 Patent had no idea what these terms meant or how to determine what they cover:

Q: . . . What do you need to know in order to determine whether anything is a graphical representation of a classroom?

THE WITNESS: I don’t know.

Q: If you wanted to try to find out the answer to that question, sir, how would you do it?

THE WITNESS: I don’t know.

[A740 (777:7-18) (objections omitted).] Neither Williamson nor his expert argued that these terms have a plain and ordinary meaning to a person skilled in the art. Nor did Williamson rely on dictionary definitions to support his proposed constructions. Accordingly, the parties agree that the terms “graphical display

representative of a classroom” and “graphical display comprising . . . a classroom region” require construction in view of the specification. [See Williamson Br. at 25-28.]¹

Williamson argues that the district court’s construction “contradicts the specification’s express definition of ‘classroom,’” [Williamson Br. at 26], but this is both incorrect and erroneously suggests that the term at issue is “classroom” in

¹ In contrast, many of the cases Williamson cites construe claim terms having plain and ordinary meanings to persons skilled in the art. *See, e.g., Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1367-68 (Fed. Cir. 2012) (holding the claim term “attached” “should be given its plain and ordinary meaning”); *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1357-59 (Fed. Cir. 2012) (holding the specification and prosecution history did not “limit the ordinary meaning of the term ‘rotary cutter deck’”); *Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1344 (Fed. Cir. 2008) (“[T]he plain language [at least one condylar element] requires only one condylar element.”); *Koepnick Med. & Educ. Research Found., L.L.C., v. Alcon Labs., Inc.*, 162 F. App’x 967, 971 (Fed. Cir. 2005) (holding the claim term “excising” means “cutting out”); *Innova/Pure Water, Inc. v. Safari Water Filtration Sys. Inc.*, 381 F.3d 1111, 1118 (Fed. Cir. 2004) (holding that because the claim term “operatively connected” “is a general descriptive term,” “the district court was correct to look to the ordinary meaning of the terms”). Even when a term does have an ordinary meaning, the specification may confirm or overcome that plain meaning. For example, Williamson cites *Thorner*, 669 F.3d at 1367-68, where this Court found that the specification’s teachings were entirely consistent with the ordinary meaning of the claim term “attached.” By contrast, in *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F. 3d 1258, 1269 (Fed. Cir. 2001), a pre-*Phillips* case cited by the district court, the Court looked at the intrinsic evidence to determine whether the patentee had given the term “mode” an unconventional meaning. Although the ordinary meaning of the word supported a broader meaning than the district court’s construction, the narrower construction supported by the intrinsic evidence controlled. *Id.* The need to look to the specification is even stronger here than in *Bell Atlantic* or *Thorner*, because all agree that the claim terms at issue have no ordinary meaning.

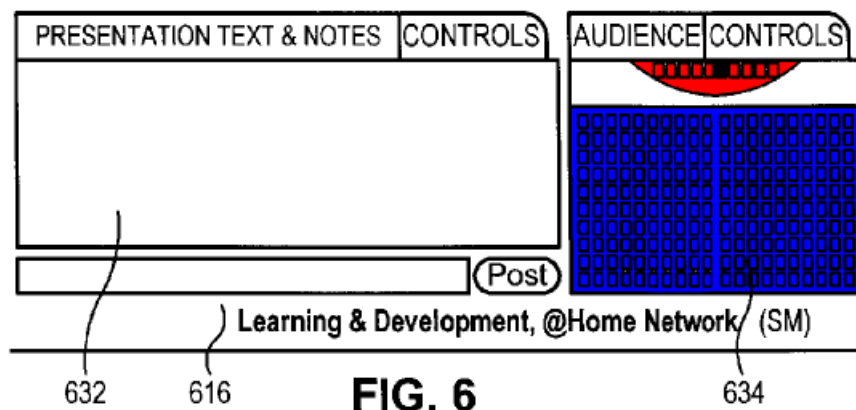
isolation. First, the district court correctly incorporated the specification’s guidance regarding the word “classroom” in its construction of the phrases “graphical display representative of a classroom” and “first graphical display comprising . . . a classroom region.” In particular, the district court’s claim construction specifically includes the phrase “an at least partially virtual space in which participants can interact,” which is taken verbatim from the specification. [A24-25; A69 (6:4-6).] Second, Williamson concedes that the specification’s statements regarding the word “classroom” are neither complete nor controlling when construing the terms “graphical display representative of a classroom” and “first graphical display comprising . . . a classroom region.” [*See* A22 (district court noting Williamson’s proposed construction was a “modification” of “the specification’s explicit definition of ‘classroom’”); Williamson Br. at 23, 26 (arguing that Williamson’s constructions are “consistent” and “consonant” with the specification).] The district court therefore properly looked to the specification to construe the disputed claim phrases as a whole.

B. The Specification Supports the District Court’s Claim Construction.

The district court’s construction further correctly reflects the teachings of the ’840 patent concerning how a “classroom” is graphically displayed to a user.

The phrase “graphical representation of the classroom” appears in the ’840 Patent specification at Column 3, line 12, where the patent explains that the

presenter's computer includes a "feedback region" that "preferably displays a graphical representation of the classroom and indicates feedback provided by audience members." [A67-68 (2:65-67, 3:11-13).] Figure 6, shown in relevant part below, shows this feedback region (labeled 616), and within that region shows the claimed "graphical representation of a classroom" as a pictorial map (labeled 634) that identifies the presenters (shaded in red) and audience members (shaded in blue) by their locations on the map. [A65; A70-71 (8:64-66, 9:5-7).] Both sides agree that Figure 6 is the only depiction of a "graphical display representative of a classroom" shown in the '840 Patent. [See Williamson Br. at 11 (citing A71 (9:5-7)).]



The '840 Patent specification twice refers to the graphical display of a classroom as providing a "map" showing the relationships between presenters and audience members. [A69 (6:9-13) ("The classroom environment module 312 provides the presenter and audience member computer systems with a map of the virtual classroom, and identifies the locations of the presenters and audience

members on the map.”); A67 (2:35-39).] As in an actual classroom, the patent’s map allows identification of the presenters and the audience members by their locations depicted on the map. The ’840 Patent offers no alternative explanation for how this virtual space is graphically represented.

The specification further explains that the classroom environment module, a module within the distributed learning server, [*Id.* (2:20-22)], “provides a classroom metaphor,” [A59 (Abstract)], or “a classroom- or auditorium-like metaphor,” [A67 (2:12-13); *id.* (2:35-39); A69 (5:66-6:1)]. Consistent with Figure 6, the Abstract explains that the classroom metaphor uses “a podium and rows of seats.” [A59 (Abstract).] These references to maps, podiums, and rows of seats reflect intuitive aspects of real-world classrooms and are repeated throughout the ’840 Patent specification. [*See, e.g.,* A67 (2:35-39); A69 (6:6-10); A71 (9:5-7).]

The pictorial map, shown in Figure 6 and described throughout the specification, contrasts with a “textual” “list of participants” described elsewhere in the ’840 Patent. Specifically, the ’840 Patent describes a “presentation/feedback” region on an audience member’s computer that “displays *textual information* provided by the presenter or other audience members.” [A68 (3:14-18) (emphasis added).] “In communication mode,” the presentation/feedback region “preferably displays *a list of participants* with whom the audience member may conduct a chat session and a text window displaying

communicated text.” [A71 (9:56-59) (emphasis added); *id.* (9:24-27).] This disclosure emphasizes the patent’s distinction between, on the one hand, the claim terms “graphical display representative of a classroom” and “first graphical display comprising . . . a classroom region,” and, on the other hand, a mere display of “textual information” including “a list of participants”—the accused structure in all of the Defendants’-Appellees’ products.

C. Williamson’s Criticisms of the District Court Do Not Accord With the Record.

Williamson’s arguments that “the term pictorial map is never used in the ’840 patent” and that the phrase “graphical representation of the classroom” is not used in conjunction with the term “map,” [Williamson Br. at 22, 29], are inconsequential. As discussed above, both the patent and Williamson’s brief equate a “graphical representation of the classroom” with the pictorial map labeled as window 634 in Figure 6, and the concept of a “map” appears throughout the specification. [See A67 (2:35-39) (“map”); A69 (6:6-13) (“map”); A71 (9:5-7) (“seating chart”); Williamson Br. at 11.]²

² Williamson’s reliance on *Jang v. Boston Scientific Corp.*, 493 F. App’x 70 (Fed. Cir. 2012) (non-precedential) is misplaced. In that case, the Court reversed the construction of the claim term “connecting strut column” as requiring “unattached” struts because “neither the . . . claims nor their specifications say anything about ‘unattached’ connecting struts.” *Id.* at 77. Here, the specification equates “a graphical representation of the classroom” with window 634 in Figure 6, which depicts a pictorial map that identifies the presenters and audience members by their locations on the map, [A67-71 (2:65-67, 3:11-13, 8:64-66, 9:5-7)], and teaches “a

Williamson’s criticism that the district court allegedly read limitations from the specification into the claims is likewise unfounded. The district court properly interpreted the terms at issue in light of the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315-16 (Fed. Cir. 2005) (en banc). The district court’s construction faithfully captures the ’840 Patent’s teaching of the type of space being addressed (“an at least partially virtual space where participants can interact”) and the specification’s consistent and exclusive teaching of how to graphically represent such a “virtual” space in a way that users would intuitively recognize as depicting an actual classroom (as a pictorial map that identifies the presenters and the audience members by their locations on the map). By way of contrast, the district court did not include in its construction many additional details that describe particular embodiments of the classroom map—for example, that the classroom environment module has “a podium and rows of seats,” presenters “stand at the podium,” “audience members sit in the seats,” and audience members communicate, for example, by “changing the color of their seat on the map.” [A69 (6:1-15).] Also not included in the construction are teachings regarding a “colored box for each participant” on the map with a “key” explaining the meaning of each color to communicate messages like “‘I’m here,’ ‘I need

map of the virtual classroom . . . identif[y]ing the locations of the presenters and audience members on the map” [A69 (6:6-13)].

help,’ [or] ‘go faster’ to the presenter by changing the color of the box” on the map. [A71 (9:5-13); A67 (2:35-47).]

Given the lack of ordinary meaning for the phrase “graphical display representative of a classroom,” the district court necessarily and correctly looked to the specification to identify the baseline characteristics of such a graphical representation, without unnecessarily reading into the claims details of particular embodiments of the classroom map.

D. Williamson’s Argument Concerning “Definition by Implication” Is a Red Herring.

Williamson incorrectly suggests that there is a standalone “doctrine of implicit claim term definition.” [Williamson Br. at 28-35.] No such doctrine exists. Rather, this Court has made clear that definition of claim terms by “implication” is part and parcel of construing claim terms in view of the intrinsic evidence. Nor are there, as Williamson suggests, “indicia of implicit claim term definition” that stand apart from the analysis of the intrinsic evidence.

[Williamson Br. at 30.] Each of the cases Williamson cites as showing such “indicia” simply applies the claim construction approach set forth in *Phillips*, 415 F.3d 1303, which emphasizes the primacy of the specification in claim construction.³

³ Several post-*Phillips* cases Williamson relies upon as supporting “indicia of implicit claim term definition” do not refer to definition of claim term by implication. [Williamson Br. at 30-34.] Rather, each case construes the claim

Specifically, *Phillips* notes that some prior cases put “too little [reliance] on intrinsic sources, in particular the specification and prosecution history” and “improperly restrict[ed] the role of the specification in claim construction.”

Phillips, 415 F.3d at 1320. The Court rejected a requirement that “any definition of claim language in the specification be express,” as “inconsistent with our rulings that the specification is ‘the single best guide to the meaning of a disputed term,’ and that the specification ‘acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.’” *Id.* (citations omitted).

Cases that have referred to “definition by implication” apply the general claim-construction principles articulated in *Phillips*, looking to the specification to guide their analysis.⁴

terms using the *Phillips* claim construction rubric. See *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1320-23 (Fed. Cir. 2011); *Voda v. Cordis Corp.*, 536 F.3d 1311, 1319-22 (Fed. Cir. 2008); *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1312-17 (Fed. Cir. 2007); *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1353-57 (Fed. Cir. 2006); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1304-05 (Fed. Cir. 2011); *ICU Med., Inc. v. Alaris Med. Sys.*, 558 F.3d 1368, 1374-76 (Fed. Cir. 2009); *Deere & Co.*, 703 F.3d at 1357-60; *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1375 (Fed. Cir. 2012); *Intervet Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287-88 (Fed. Cir. 2010); *Howmedica*, 540 F. 3d at 1344-47.

⁴ Post-*Phillips* cases uniformly refer to “definition by implication” in the context of reviewing the intrinsic evidence. See, e.g., *Irdeto*, 383 F.3d at 1300; *AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1052-54 (Fed. Cir. 2010); *In re Abbott Diabetes Care*, 696 F.3d 1142, 1148-50 (Fed. Cir. 2012); *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 629 F. 3d 1311, 1323-29 (Fed. Cir. 2010), *vacated and reh’g en banc granted on other grounds*, 419 F. App’x 989 (Fed. Cir. 2011); *Amazon*

Even if there were a separate doctrine of “definition by implication,” however, it would apply here. Where, as here, a claim term is used consistently in a patent specification, the applicant has defined the claim term by implication. *See Bell Atl.*, 262 F.3d at 1271; *Irdeto*, 383 F.3d at 1301. As noted above, the specification repeatedly refers to a pictorial map of the classroom that identifies the presenters and audience members by their location on the map. [*See supra* Section II.B.] Because the specification, including the figures, consistently and exclusively describes the “graphical display representative of a classroom” as a pictorial map that identifies presenters and audience members by their locations on that map, the district court correctly included those features as part of the construction of these terms. *See Hologic, Inc. v. SenoRx, Inc.*, 639 F.3d 1329, 1338 (Fed. Cir. 2011); *IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109, 1120 (Fed. Cir. 2011).⁵

Moreover, Williamson’s argument that the district court’s construction is inconsistent with the objectives of the invention is incorrect. The patent teaches that the objective of “provid[ing] the benefits of classroom interaction without the

Raisins Int’l, Inc. v. Ocean Spray Cranberries, Inc., 306 F. App’x 553, 557-58 (Fed. Cir. 2008) (non-precedential).

⁵ *See also Akamai Techs.*, 629 F.3d at 1327 (Fed. Cir. 2010) (“[T]he specification as a whole makes clear that including the object’s original URL is the only method to achieve the claimed association between an alphanumeric string and the embedded object. Indeed, it is the only method described.”), *vacated and reh’g en banc granted on other grounds* 419 F. App’x 989 (Fed. Cir. 2011).

detrimental effects of complicated hardware or software, or the costs and inconvenience of convening in a separate place” is advanced by “provid[ing] a classroom or auditorium-like metaphor,” [A67 (2:3-7, 2:10-14)], which includes “a map of the classroom showing the relative relationship among presenters and audience members.” [*Id.* (2:35-39); A69 (6:9-13)].

Williamson’s argument that “the patentee never touted the display of a classroom map as an improvement over the prior art” is also incorrect. [Williamson Br. at 32.] During prosecution, to show that the prior art disclosed the concept of a graphical display representative of a classroom, the examiner identified a “classroom map,” stating: “[In Abrahamson,] [a]s the students log in, their seating locations in the classroom are shown by a highlighted icon in the *classroom map* on the teacher’s screen.” [A7503 (emphasis added).] In responding, the applicant argued that Claim 1 required a graphical display representative of the classroom on *both* the presenter’s and the audience member’s computer screen, whereas Abrahamson’s classroom map appeared only on the presenter’s computer screen. [A730-31 (“Abrahamson merely discloses . . . ‘the classroom map on the teacher’s screen.’ Abrahamson does not teach or suggest displaying a graphical display representative of the classroom on a student’s screen.”).]

E. The District Court Correctly Rejected Williamson's Proposed Constructions.

Williamson's proposed constructions are improper for at least four reasons.

First, Williamson's constructions do not adhere to the specification. As noted above, the specification refers to a "classroom" as "an at least partially virtual space in which participants can interact." [A69 (6:4-6).] By contrast, in an apparent attempt to avoid invalidating prior art, Williamson seeks to read a limitation into the claims that the virtual classroom space must "allow[] audience members to interact with *both* the presenter *and* other audience members." That is not what the specification says. The specification imposes no requirement that an audience member must be able to interact with *both* presenters *and* audience members. It simply states that "participants can interact." For example, it is sufficient if an audience member can interact only with the presenter, or can interact only with another member of the audience.

Second, this part of Williamson's constructions contradicts Claim 17, which requires "a first graphical display comprising . . . a classroom region" on the presenter's computer system, with no such corresponding display requirement on the audience members' systems. [A72 (Claim 17).] If there is no displayed classroom region on the audience members' computers, Williamson's constructions would require the audience members to interact with each other through the displayed classroom region on the presenter's computer system, which

is anomalous at best, if not impossible; the specification does not describe how such an embodiment would function. The district court recognized this problem with Williamson's construction and correctly rejected it. [A23-24.]

Third, Williamson's argument that his construction "comports with" statements made in the prosecution history, [Williamson's Br. 27], is factually wrong and legally irrelevant. Factually, the patentee never distinguished prior art on the basis that the claims require the capability for audience members to interact with each other. Rather, as discussed above, the patentee argued that the prior art differed from its claims because the prior art included a classroom map only on the teacher's screen. Moreover, Williamson admits that the prosecution history merely "comports with" its proposed construction, which falls far short of *requiring* the addition of a limitation from the prosecution history. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003) ("for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable").

Fourth, Williamson's proposed constructions are hopelessly indefinite. The claim terms at issue require explication of what it means to provide a graphical display representative of a classroom on a computer screen. Yet, Williamson's proposal ("a viewable illustration of an at least partially virtual space that allows audience members to interact with both the presenter and other audience

members”) is silent on what that display must look like. The phrases “viewable illustration” and “at least partially virtual” provide no guidance to one skilled in the art as to how to create a graphical display of a classroom. Even Williamson’s expert, Dr. Souri, was either unwilling or unable to say what defines the metes and bounds of Williamson’s proposed construction. [See A1382-83 (182:12-187:20); A1384-85 (197:10-198:4).]

For all of these reasons, this Court should affirm the district court’s constructions for the “graphical display representative of a classroom” terms.

III. THE DISTRICT COURT CORRECTLY CONCLUDED THAT CLAIM 8 IS INVALID BECAUSE THE “DISTRIBUTED LEARNING CONTROL MODULE FOR [PERFORMING THE RECITED FUNCTIONS]” IS INDEFINITE.

Section 112, Paragraph 6, permits a patentee to express a claimed element as a “means . . . for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112, ¶ 6. However, “in exchange for being able to draft a claim limitation in purely functional language, the applicant must describe in the patent specification some structure which performs the specified function.” *Noah Sys.*, 675 F.3d at 1318 (internal quotation marks and alterations omitted). The structure must also be “clearly linked or associated with the claimed function.” *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1363 (Fed. Cir. 2012).

By requiring the specification to disclose and clearly link corresponding structure, the statute “confines the breadth of protection otherwise permitted by purely functional claiming,” *Noah Sys.*, 675 F.3d at 1318, and thereby enforces “the requirement that a claim particularly point out and distinctly claim the invention” under 35 U.S.C. § 112, ¶ 2. *See Ergo Licensing*, 673 F.3d at 1363. “If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification.” *Noah Sys.*, 675 F.3d at 1318 (quoting *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed Cir. 2003)).

Here, the patentee took advantage of the benefits of functional claiming but “has not paid the price” by disclosing corresponding structure. As detailed below, the district court correctly found that the “distributed learning control module ... for coordinating the operation of the streaming data module” of Claim 8 is indefinite because it does not connote sufficient structure to avoid a means-plus-function construction under 35 U.S.C. § 112, ¶ 6, and the specification fails to disclose a corresponding structure. [A31-33.]⁶

⁶ The district court’s determination that the term “streaming data module for [performing the recited functions]” is also subject to § 112, ¶ 6 was not the basis for its invalidity determination or the parties’ non-infringement stipulation and

A. The Claim Language Fails To Recite Sufficient Structure for the “Distributed Learning Control Module for [Performing the Recited Functions],” and Is Therefore Subject to § 112, ¶ 6.

The district court correctly determined that 35 U.S.C. § 112, ¶ 6, applies to the “distributed learning control module for [performing the recited functions]” term. *See Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1361 (Fed. Cir. 2000). That provision governs construction of claim terms that (1) recite one or more functions, and (2) fail to recite sufficient structure for performing those functions. *See* 35 U.S.C. § 112, ¶ 6. The words “means for” are not required to trigger the statute’s applicability. *See Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998). Rather, absence of the words “means for” raises a rebuttable presumption that § 112, ¶ 6 does not apply, but the presumption may be overcome where the claim limitation at issue does not “recite sufficiently definite structure.” *MIT*, 462 F.3d at 1353. Even where some structure is recited, the presumption may still be overcome if the recited structure is not “sufficient structure for performing [the claimed] function.” *See id.*

1. The Intrinsic Evidence Requires Application of § 112, ¶ 6.

Implicit in Williamson’s argument that “Defendants never attempted to meet their burden” is the unprecedented theory that the § 112, ¶ 6 presumption cannot be rebutted based on the intrinsic record, but rather requires extrinsic evidence from

therefore is not germane to the issues presented by this appeal. *See Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1350 (Fed. Cir. 2006).

an expert. That is not the law. Although expert testimony may be relevant, it has never been required. “The task of determining whether the limitation in question should be regarded as a means-plus-function limitation, like all claim construction issues, is a question of law for the court.” *Lighting World*, 382 F.3d at 1358.

“This presumption can collapse when a limitation lacking the term ‘means’ nonetheless relies on functional terms rather than structure or material to describe performance of the claimed function.” *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003). The Court decides “on an element-by-element basis, based upon the patent and its prosecution history, whether section 112 ¶ 6 applies.” *Cole v. Kimberly Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996).⁷

Most of the Court’s decisions upholding the presumption rest on the existence of a dictionary definition of the term in question, bolstered by frequent use of the term in the patent to designate a class of structures. *See, e.g., Flo Healthcare*, 697 F.3d at 1367 (finding “height adjustment mechanism” has a reasonably understood meaning based on dictionary definition and use in the patent 24 times, but not in a purely functional manner); *Lighting World*, 382 F.3d at 1360 (“In addition to the fact that the word ‘connector’ has a generally understood

⁷ Williamson suggests that a litigant must adduce clear and convincing proof to rebut the presumption, but he cites no supporting authority. In *Apex*, the Court held that the burden of proof to rebut the presumption “must be met by a preponderance of the evidence.” *Apex*, 325 F.3d at 1372. Under either standard, however, the record supports the district court’s conclusion.

meaning as demonstrated by the dictionary definitions of the terms,” the patent application uses “connector” 40 times, and “the context makes clear that the term is used . . . as a description of structure that is generally understood to persons of skill in the art.”); *Apex*, 325 F.3d at 1373-74 (holding that, in light of a dictionary definition, the term “circuit” with an appropriate identifier such as “interface,” “programming,” and “logic,” identifies structural meaning to one of ordinary skill).

In contrast, where the claim term is “simply a nonce word or a verbal construct that is not recognized as the name of structure” and may be “simply a substitute for the term ‘means for,’” the presumption has been rebutted. *See Lighting World*, 382 F. 3d at 1360. For example, “[t]he generic terms ‘mechanism,’ ‘means,’ ‘element,’ and ‘device,’ typically do not connote sufficiently definite structure,” and thus invoke § 112, ¶ 6. *MIT*, 462 F.3d at 1354 (“colorant selection mechanism” subject to § 112, ¶ 6); *see also Welker Bearing Co. v. PhD, Inc.*, 550 F.3d 1090, 1096 (Fed. Cir. 2008) (“mechanism for moving said finger” subject to § 112, ¶ 6 because the claim provided “no structural context for determining the characteristics of the ‘mechanism’ other than to describe its function”); *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1325 (Fed. Cir. 2004) (“control mechanism” subject to § 112, ¶ 6); *Mas-Hamilton*, 156 F.3d at 1213-14 (“lever moving element” subject to § 112, ¶ 6 because the term was defined in terms of its function, not its mechanical structure).

The intrinsic evidence in this case compels application of § 112, ¶ 6. The “[adjective] module for [performing a function]” grammatical structure in Claim 8 tracks the classic “means for [performing a function]” language that renders a term subject to § 112, ¶ 6. Further, as this Court has recognized, where the applicable field includes computer hardware or software, just like the terms “element,” “mechanism,” or “means,” the word “module” is generic and devoid of structure. In *Ranpak Corp. v. Storopack, Inc.*, No. 98-1009, 1998 WL 513598, at *2 (Fed. Cir. July 15, 1998) (non-precedential), the Court found no meaningful distinction between “settable control *module*” and “settable control *means*,” because each “merely sets forth the same black box without recitation of structure for performing the same specified function.”⁸ The U.S. Patent Office also lists “module for” as a “non-structural term[] that may invoke § 112, ¶ 6.” [A751.] In sum, as the district court correctly observed, as used in Claim 8, “module” is “simply a generic description for software or hardware that performs a specified function.” [A31.]

The specification confirms that the “distributed learning control module” is not a name for structure. Rather, the specification describes the “distributed

⁸ See also *Kozam v. Phase Forward Inc.*, No. 04-CV-1787, 2005 WL 6218037, at *7 (D. Md. Aug. 29, 2005) (holding that the terms “first data verification module” and “second data verification module” are means-plus-function limitations).

learning control module” as a “functional unit.” [A69 (5:34-36).] It is depicted as a nothing more than a black box in Figure 3, reproduced below:

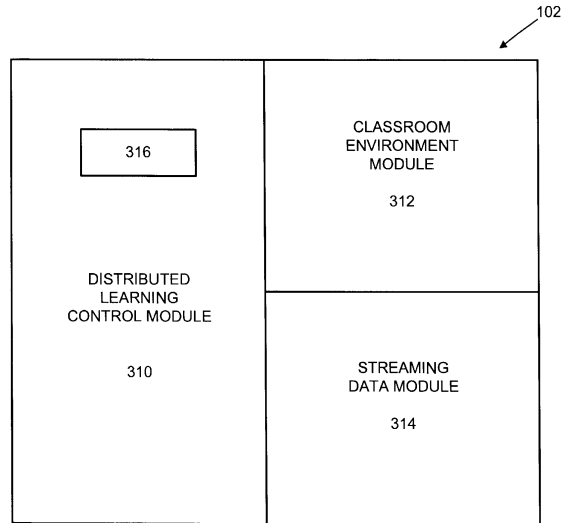


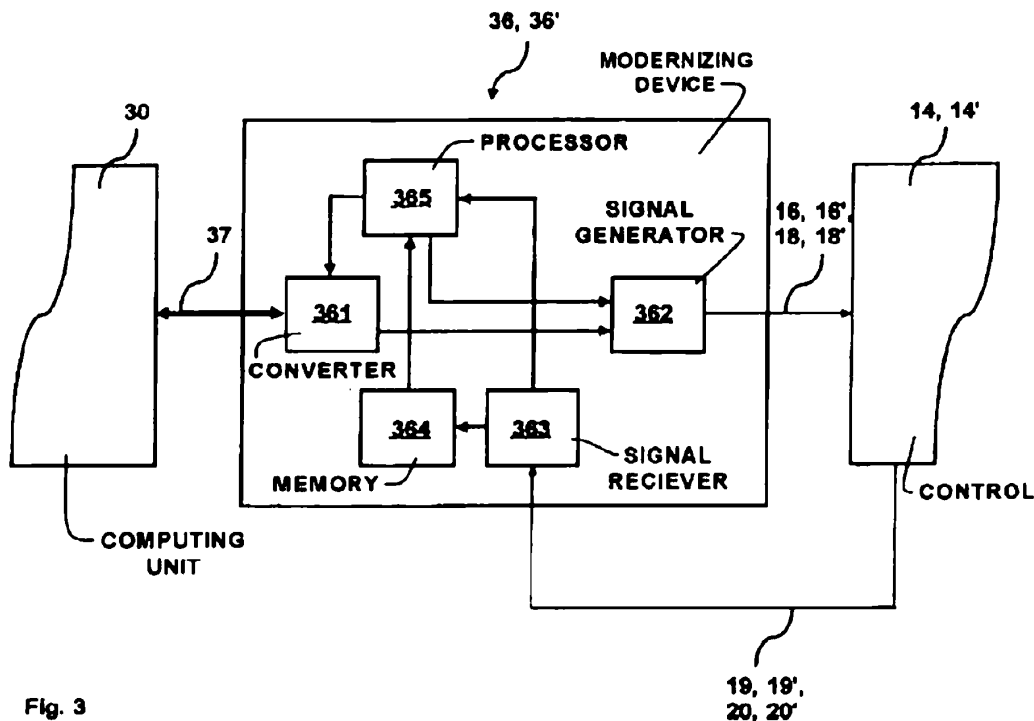
FIG.3

[A62.] The specification describes various functions that the “distributed learning control module” can perform, but provides no information about its structure.

Given that the only defining feature of the “distributed learning control module” is the functions it performs, § 112, ¶ 6 must apply to prevent purely functional claiming. The claim “cannot be construed so broadly to cover every conceivable way or means to perform” the recited functions. *Mas-Hamilton*, 156 F.3d at 1214.

The specification’s disclosure of the “distributed learning control module” as a “functional unit” stands in stark contrast to the “modernizing device” at issue in *Inventio AG v. ThyssenKrupp Elevator Ams. Corp.*, 649 F.3d 1350 (Fed. Cir. 2011), on which Williamson relies. The written description in that case provided a block diagram, reproduced below, depicting the internal components of the

claimed “modernizing device,” which included a signal generator, processor, converter, signal receiver, and memory. *Id.* at 1358. It also showed the interconnections between and among those internal components and other structures within the claimed system. *Id.* Unlike the term at issue here, the “modernizing device” was not a mere abstraction—it was an electrical circuit composed of a structural arrangement that the patent’s claims and written description spelled out. *See id.*



Many of Williamson’s other authorities similarly considered claim elements directed to electrical circuits. *See MIT*, 462 F.3d at 1354-55; *Apex*, 325 F.3d at 1373-74; *Power Integrations, Inc. v. Fairchild Semiconductor Int’l Inc.*, Nos. 2011-1218, 2012-1238, 2013 WL 1200270, at *12 (Fed. Cir. Mar. 26, 2013). These “circuit” cases are inapposite. The “distributed learning control module” is

neither claimed as a set of circuit elements, nor described as a specific circuit in the specification. Indeed, the specification underscores its generic nature, stating that it can be implemented in either hardware or software. [A68 (4:40-44).] Unlike “circuit,” “module” is not a structural term, and the specification here makes clear that the “distributed learning control module” is a mere abstraction. In this regard, Williamson concedes, as he must, that the term “module” standing alone may operate as a nonce word. [Williamson Br. at 43.] Consequently, Williamson’s reliance on these circuit-centric cases to contend that Claim 8 recites the “inputs, outputs, and objective” of the “distributed learning control module” is misplaced.⁹ [Williamson Br. at 44.] This argument also misses the salient point. Whether or not the claim language or specification describes what the “distributed learning control module” “receives” and “relays,” it does not describe any structure, let alone sufficiently definite structure, to perform those functions.¹⁰

⁹ This argument is also inconsistent with the claim language itself. For instance, Williamson asserts that the “output” of the “distributed learning control module” is the audience member computer’s display. [Williamson Br. at 42-43.] But Claim 8 says that the “streaming data module”—not the “distributed learning control module”—“provid[es] streaming data . . . to the presenter and audience member computer systems.” [A72 (Claim 8, ll.52-55).]

¹⁰ Williamson’s attempt to find the missing structure for the “distributed learning control module” in the recitation of “distributed learning server” is similarly misguided. The server cannot provide structure for the “distributed learning control module,” which is claimed as some structurally undefined functional “module” within that server. See *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1366 (Fed. Cir. 2008) (“NMI’s argument that the first bank computer

Like the “settable control module for [performing the recited functions]” in *Ranpak*, the “distributed learning control module for [performing the recited functions]” of Claim 8 is defined solely by the functions it performs. The claim language recites no structure, let alone structure sufficient for performing the multiple complex functions recited in the claim. The intrinsic evidence confirms that the “distributed learning control module” is a mere “functional unit”—an abstraction that performs the recited functions. Taken together, this evidence overcomes the presumption arising from the lack of the term “means,” and therefore the district court correctly determined that the “distributed learning control module for [performing the recited functions]” is subject to § 112, ¶ 6.

2. The Extrinsic Evidence Does Not Favor Williamson.

There is no extrinsic evidence in this record that the phrase “distributed learning control module” has a common or generally understood meaning—structural or otherwise—in the relevant art. *See MIT*, 462 F.3d at 1354 (stating the presumption is overcome where the disputed term “is not defined in the specification and has no dictionary definition, and there is no suggestion that it has a generally understood meaning in the art”).

Extrinsic evidence, if it exists, can provide guidance as to whether a term has a generally understood meaning that connotes structure. In *Lighting World*, for

constitutes sufficient structure would require the first bank computer to include a first bank computer, which is both redundant and illogical.”).

example, the Court’s conclusion that the term “connector assembly” was used “in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their functions,” was based on dictionaries demonstrating that the term had “achieved recognition as a noun denoting structure.” *Lighting World*, 382 F.3d at 1359-61. Similarly, in *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996), the Court relied on dictionary definitions of “detent” to decide that the term “detent mechanism” had a “reasonably well understood meaning in the art” as a “name for structure.”

Unlike the terms at issue in *Lighting World* or *Greenberg*, the phrase “distributed learning control module” has no dictionary definition. Consistently, the district court found “no evidence . . . that these names connote well understood structures in the computer technology field.” [A32.] On appeal, Williamson likewise offers no support or record citations for the contention that the presence of the phrase “distributed learning control” before “module” somehow alters the analysis. [Williamson Br. at 43.]

Williamson’s repeated contention that the district court “made no attempt to consider this term from the view point of one skilled in the art” is inaccurate. With respect to the threshold question whether § 112, ¶ 6 applies, there is no expert testimony that the claim language recites sufficient structure. Williamson filed a

declaration from his expert, Dr. Sourì, in May 2012 in conjunction with his claim construction brief, but the declaration never even addresses the question whether “distributed learning control module” connotes well-understood structure to one skilled in the art. [A621-656.] Rather, it simply asserts in conclusory fashion that § 112, ¶ 6 does not apply. [A655 (¶ 64).] Indeed, when Dr. Sourì was asked in deposition to identify any corresponding structure in the claim language, he could not or would not do so. [A1390 (250:16-251:9) (“Q. Can you identify any structure for me whatsoever in that claim element, Dr. Sourì, that would perform the functions set forth in that element? . . . A. I have not been asked to look for it in that claim element.”).]

Williamson criticizes the district court for supposedly not considering language from a *second* Sourì declaration that accompanied Williamson’s motion for reconsideration, but that motion did not even seek reconsideration of the threshold determination that § 112, ¶ 6 applies.¹¹ [A6991-95.] Williamson cannot fairly argue that the district court erred by “not considering” a declaration that was not even filed until *after* the *Markman* decision, and that did not even address the threshold applicability of § 112, ¶ 6. Further, the district court properly denied

¹¹ Williamson argued on reconsideration not whether § 112, ¶ 6 applied, but instead that the specification disclosed sufficient structure. [A6991-95.]

Williamson's motion for reconsideration under applicable rules, [A37-40], and Williamson does not challenge that decision on appeal.¹²

In any event, the district court's order denying reconsideration makes clear that the court considered both of the Souri declarations as well as the Souri deposition transcript. [See A39-40.] As the district court correctly observed in denying the motion for reconsideration, Souri's late-filed declaration merely "elaborates on his previous submission." [*Id.*] Like the first declaration, the second does not opine that "distributed learning control module" has a well-understood meaning or that the claim language itself provides sufficient structure to remove the term from § 112, ¶ 6. [A7001-7009.] If they are relevant at all, both declarations go only to the second prong of the § 112, ¶ 6, analysis, *i.e.*, the sufficiency of the *specification's* disclosure of corresponding structure to perform

¹² Under the applicable local rule, reconsideration requires that (i) new fact or law be presented that could not have been known previously with exercise of reasonable diligence, (ii) new facts or a change in law occurred after the decision, or (iii) a manifest showing of failure to consider material facts previously presented to the court. The district court found none of the three grounds met in this case. [A37-40 (citing Central District of California Local Rule 7-18).] This Court "gives broad deference to the trial court's application of local procedural rules in view of the trial court's need to control the parties and flow of litigation before it." *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed. Cir. 2005). In particular, the Court has upheld application of the local rule on which the district court relied in denying reconsideration. *See Giora George Angres, Ltd. v. Tinny Beauty & Figure, Inc.*, No. 96-1507, 1997 WL 355479, at *8 (Fed. Cir. June 26, 1997) (non-precedential) (district court did not abuse its discretion in declining to admit evidence presented with motion for reconsideration because it was not "newly discovered" within the meaning of Fed. R. Civ. P. 60(b)(2) or C.D. Cal. Local Rule 7.1(i)(1)).

the claimed functions, as required by § 112, ¶ 6. But as detailed below, the district court correctly determined that the specification lacks disclosure of corresponding structure.

B. The Patent Does Not Disclose Structure Corresponding to the Function of “Coordinating the Operation of the Streaming Data Module.”

Because the “distributed learning control module” is a means-plus-function term governed by § 112, ¶ 6, the specification must disclose corresponding structure that is “clearly linked or associated with the claimed function.” *Ergo Licensing*, 673 F.3d at 1363. In the case of computer-implemented means-plus-function limitations, this Court has “consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor.” *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1384 (Fed. Cir. 2009). Likewise, “simply disclosing software . . . without providing some detail about the means to accomplish the function, is not enough.” *Function Media, L.L.C. v. Google Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013). Rather, the specification must disclose a specific algorithm for performing the claimed function. *Id.* In this context, an algorithm is “a step-by-step procedure for accomplishing a given result”—*i.e.*, performance of the function. *Ergo Licensing*, 673 F.3d at 1365. Absent such a disclosure, the term is indefinite, and the claims that recite it invalid. *See id.*

1. The Specification Does Not Disclose an Algorithm Clearly Linked to the “Coordinating” Function.

As discussed above, the ’840 Patent describes the “distributed learning control module” as a “functional unit,” illustrated simply as a black box in Figure 3. [A68 (3:42-44) (“FIG. 3 is a block diagram illustrating the functional units of the distributed learning server . . .”).] The specification discloses no algorithm for performing the claimed function of “coordinating the operation of the streaming data module,” much less one that is clearly linked to the claimed “coordinating” function. In fact, the word “coordinating” (including variants like “coordinate”) does not appear in the specification at all.

The portions of the specification that describe what occurs inside box 310 of Figure 3 (the “distributed learning control module”) “merely recite functional, not structural, language.” *See Noah Sys.*, 675 F.3d at 1316-1317. For example, the specification explains that the module can “control[] the communications among the various computer systems 106, 108 in the distributed learning system 100.” [A69 (5:37-39).] The module can also “manage[] the other modules in the DLS 102.” [*Id.* (5:40).] This at most simply restates the claimed function, assuming that “controlling” and “managing” are synonymous with “coordinating.” *See ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 518 (Fed. Cir. 2012) (“step 114 in Figure 3, to which ePlus refers . . . is just a black box that represents the purchase-order-generation *function* without any mention of a corresponding

structure.”). The specification also references numerous other functions that the “distributed learning control module” may perform, such as “execut[ing] an operating system,” and “receiving and responding to requests for data.” [A69 (5:40-47).] None of this describes structure. “This type of purely functional language, which simply restates the function associated with the means-plus-function limitation, is insufficient to provide the required corresponding structure.” *See Noah Sys.*, 675 F.3d at 1317. The “distributed learning control module” is no more than what the patent says: a “functional unit.” It is an “abstraction that describes [a] function . . . which is performed by some undefined component of the system.” *See Blackboard*, 574 F.3d at 1383.

Section 112, ¶ 6, is not satisfied by characterizing the “distributed learning control module” as *any* computer-implemented device or program that performs the claimed “coordinating” function; rather, a specific algorithm must be disclosed for performing that function. As this Court has recognized, computers “can be programmed to perform very different tasks in very different ways.” *Aristocrat Techs.*, 521 F.3d at 1333. “That various methods might exist to perform a function is precisely why the disclosure of specific programming is required.” *Noah Sys.*, 675 F.3d at 1317 (internal quotation marks omitted).

The ’840 Patent, however, does not disclose any algorithm that is clearly linked to and necessary for performing the function of coordinating the operation

of the streaming data module—a function that, as noted above, is not even mentioned in the specification. “Even described in prose, an algorithm is still a step-by-step procedure for accomplishing a given result.” *Ergo Licensing*, 673 F.3d at 1365 (internal quotation marks omitted). The disparate specification excerpts that Williamson cobbles together merely state functions that the “distributed learning control module,” or in some cases other claim elements, can perform, but none explains steps the module takes to perform the claimed function at issue, namely, coordinating the operation of the streaming data module.¹³

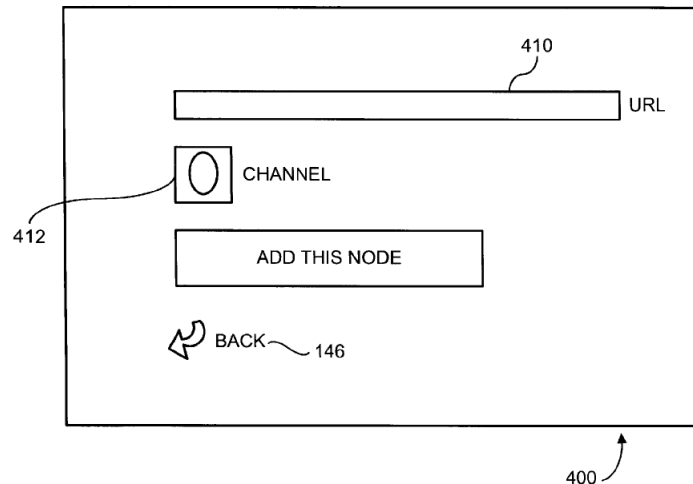
First, the specification’s statement that the distributed learning control module “controls the communications” among various computers and “manages the other modules” does not comprise an algorithm. [Williamson Br. at 51 (citing A69 (5:37-46)).] These are not steps. *See Encyclopaedia Britannica, Inc. v. Alpine Elecs., Inc.*, 355 F. App’x 389, 395 (Fed. Cir. 2009) (non-precedential) (rejecting patentee’s purported “one-step algorithm” as “pure functional claiming, which does not comply with the disclosure requirement of § 112 ¶ 6”). At most, “that language simply describes the function to be performed.” *See Blackboard*,

¹³ For the same reason, Williamson’s suggestion that the claim language itself provides the required algorithm fails. [Williamson Br. at 50.] Claim 8 lists elements of the claimed communication system; it does not provide a step-by-step explanation of how the “distributed learning control module” performs the claimed “coordinating” function. Williamson provides no authority for the logically flawed proposition that, once a court determines that § 112, ¶ 6, applies, the corresponding structure for a means-plus-function claim limitation can be found in the claim itself. If that were true, then § 112, ¶ 6, would not apply in the first instance.

574 F.3d at 1384. It merely “describes an outcome, not a means for achieving that outcome.” *Id.* It does not explain **how** the module controls or manages, much less how it coordinates the operation of the streaming data module.

The same is true of the specification’s disclosure that the distributed learning control module “provides a presenter with streaming media selection functionality.” [Williamson Br. at 51 (citing A69 (5:60-65)).] In addition, this disclosure is not clearly linked to the claimed function at issue. Indeed, it refers to the distributed learning control module interacting with a *different* claim element (the presenter computer) and provides no information on how the module performs the claimed function of coordinating *the operation of the streaming data module*. Interactions with the streaming data module are notably absent from this disclosure.

Figures 4 and 5 likewise do not disclose algorithms for performing the claimed “coordinating” function. [Williamson Br. at 51-52.] Figure 4 “***illustrates a representative display*** 400 displayed on the presenter computer system 106 under the direction of the DLCM 310 according to an embodiment of the present invention for allowing a presenter to define and select a source of data.” [A70 (7:1-5) (emphasis added).]

**FIG. 4**

The specification makes clear that the figure merely illustrates an example of the images that appear on the presenter's screen at the direction of the distributed learning control module—"examples of the results of the operation of an unspecified algorithm." *See Aristocrat Techs.*, 521 F.3d at 1334 (finding that patent's figures and tables were not algorithms but, "at most, pictorial and mathematical ways of describing the claimed function of the game control means"). Figure 5 fares no better. It likewise consists of a screen shot that ***"illustrates a representative display 500*** displayed on the presenter computer system 106 under direction of the DLCM 310 according to an embodiment of the present invention for allowing a presenter to view the selected sources of data." [A70 (7:20-24) (emphasis added).] It too merely "presents several results to be obtained, without describing how to achieve those results, and certainly not how"

to coordinate the operation of the streaming data module. *See In re Aoyama*, 656 F.3d 1293, 1298 (Fed. Cir. 2011).

In addition to failing to disclose any algorithm, Figures 4 and 5 are also not clearly linked to the “coordinating” function in the specification.¹⁴ *See id.* at 1297 (finding error where identified corresponding structure “was not clearly linked or associated by the specification or prosecution history with the function actually recited in the claim”). These figures focus entirely on the presenter’s computer; they never even mention the streaming data module, much less how it is coordinated by the distributed learning control module in the distributed learning server.

Williamson also references disclosure concerning detecting computer capabilities, providing “properly-sized program windows,” and providing “authentication services for providing security to the participants.” [Williamson Br. at 52.] This disclosure merely describes functions and results, not algorithms. [See A69 (5:48-65) (“providing auto-sensing capabilities . . .”, “creating the properly-sized program windows . . .”, “providing security to the participants

¹⁴ Instead, these figures are linked to the separately claimed “content selection control for defining at least one remote streaming data source and for selecting one of the remote streaming data sources for viewing.” [See, e.g., A70 (7:1-5) (“FIG. 4 illustrates a representative display 400 displayed on the presenter computer system 106 . . . for allowing a presenter *to define and select a source of data.*”) (emphasis added).] The “content selection control” is an element of the “presenter computer system” recited in Claim 8, not of the “distributed learning control module.” [A72 (Claim 8).]

...”).] Moreover, none of this disclosure concerns the claimed function of “coordinating the operation of the streaming data module.” Here too, these passages are linked to other claim elements. The automatic detection of computer capabilities relates directly to the distinct “module for verifying” claimed in dependent Claim 15. That claim recites “the distributed learning server *further comprises a module for verifying* that the audience member computer system meets hardware and software requirements for displaying the data produced by the selected remote streaming data source.” [A72 (Claim 15) (emphasis added).]

Similarly, the specification’s discussion of “authentication” relates to dependent Claim 22, which recites “a module for *authenticating a user* of the presenter computer system to prevent unauthorized use of the content selection control.” [*Id.* (Claim 22) (emphasis added).] These passages relate to and are linked to other “modules” of the distributed learning server, not the “distributed learning control module,” and the “coordinating the operation of the streaming data module” function at issue on appeal. *See Noah Sys.*, 675 F.3d at 1317 (rejecting patentee’s “efforts to find structure in the portion of a specification linked to a different claim element”); *Med. Instrumentation*, 344 F.3d at 1216 (rejecting as

“corresponding structure for one function, structure that was not clearly linked to that function but was clearly linked in the specification to a different function”).¹⁵

Finally, Williamson relies on references in the specification to operating systems (“MICROSOFT WINDOWS NT® or SUN MICROSYSTEMS SOLARIS® 2.x”), generic programming languages (“JAVASCRIPT and C++”), and web servers (“NETSCAPE ENTERPRISE SERVER 2.0 or the APACHE web server”). [Williamson Br. at 52-53.] What is missing, though, is how these generic operating systems, programming languages, and servers would be used to perform the particular function of “coordinating the operation of the streaming data module” recited in Claim 8. [See A69 (5:34-47).] See *ePlus*, 700 F.3d at 520 (“The problem here is not the adequacy of the substance or form of the disclosure, but the absence of any disclosure at all.”). Without any disclosure of a corresponding algorithm, the claim limitation is invalid.

2. Dr. Sourì’s Opinion Cannot Supplant the Absence of Corresponding Structure in the Specification.

Failing to find any algorithmic structure in the ’840 Patent itself, Williamson relies heavily on Dr. Sourì’s post-*Markman* declaration. As this Court has held, unsupported expert testimony cannot supplant the total absence of corresponding

¹⁵ Williamson’s attempt to supply the missing link through the declaration of Dr. Sourì is unavailing. See *Omega Eng’g*, 334 F.3d at 1331-32 (holding expert testimony cannot be used to “rewrite the patent’s specification” to create a clear link where the language in the specification provides none).

structure in the specification. *See Default Proof*, 412 F.3d at 1302; *Noah Sys.*, 675 F.3d at 1312 (“While it is undisputed that the question of whether a claim is indefinite is based on how the claim limitation would be understood by one of skill in the art, the testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification”). “Having failed to provide any disclosure of the structure” for the “coordinating” function in the specification, Williamson “cannot rely on the knowledge of one skilled in the art to fill in the gaps.” *Function Media*, 708 F.3d at 1319.

Expert testimony is appropriate only to judge the sufficiency of a *disclosed* algorithm. *See Aristocrat Techs.*, 521 F.3d at 1337. Where no algorithm is disclosed in the specification, resort to expert testimony is improper. *Noah Sys.*, 675 F.3d at 1318.¹⁶ Thus, Williamson’s repeated criticism of the district court for allegedly failing to consider this late expert testimony on this point is both factually incorrect and legally irrelevant.

¹⁶ In *Noah Sys.*, the Court further held that the same rule applies when an algorithm is disclosed for some but not all of the recited functions of a particular means-plus-function term. 675 F.3d at 1318 (“We conclude that where, as here, a claim recites multiple identifiable functions and the specification discloses an algorithm for only one, or less than all, of those functions, we must analyze the disclosures as we do when no algorithm is disclosed.”). Because Claim 8 recites three functions performed by the distributed learning control module, and no algorithm is disclosed for at least the “coordinating” function, the rule of *Noah Sys.* applies here regardless of whether the district court was correct in finding adequate structure for the other two recited functions.

Even it were germane to the analysis, and even if it had been timely tendered, Dr. Sourì's opinion would not change the result. Dr. Sourì's explanation of the "coordinating" function simply recasts the term with synonyms for "coordinating," and thus is both wholly circular and lacking any algorithmic structure: "[B]y *managing* what the streaming data module provides to the participants, the DLCM *coordinates* the operation of the streaming data [module] by *controlling* what streaming data is to be provided by the streaming data module." [Williamson Br. at 53.] This *ipse dixit* from Dr. Sourì, like the statements from the specification on which Williamson relies, does not describe an algorithm. Even if the term could be recast as managing what the streaming data module provides and controlling what streaming data is provided (assuming those are different things) that is just a different functional description, lacking any algorithmic description of how the function is performed. On this point, it is telling that Dr. Sourì would not or could not identify any corresponding structure at his deposition. [A1390 (250:16-251:9).]

By failing to describe a step-by-step procedure by which the distributed learning control module coordinates the operation of the streaming data module, the '840 patent "has attempted to capture any possible means for achieving that end. Section 112, paragraph 6, is intended to prevent such pure functional claiming." *Noah Sys.*, 675 F.3d at 1317. Claim 8 is therefore invalid as indefinite.

See Ergo Licensing, 673 F.3d at 1363; *ePlus*, 700 F.3d at 519 (“[T]he specification does not disclose any structure that is responsible for generating purchase orders. There is no instruction for using a particular piece of hardware, employing a specific source code, or following a particular algorithm. There is therefore nothing in the specification to help cabin the scope of the functional language in the means for processing element: The patentee has in effect claimed everything that generates purchase orders under the sun. The system claims are therefore indefinite.”).

CONCLUSION

For the above-stated reasons, Defendants-Appellees respectfully request that this Court affirm the district court’s judgment.

Dated: April 18, 2013

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that this principal brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because the brief contains 12,781 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and Fed. Cir. R. 32(b).

Dated: April 18, 2013

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CERTIFICATE OF SERVICE AND FILING

I hereby certify that on April 18, 2013, I electronically filed the foregoing **BRIEF OF DEFENDANTS-APPELLEES** using the Court's CM/ECF filing system. Counsel was served via CM/ECF which constitutes service, pursuant to Fed. R. App. P. 25(c)(2), Fed. Cir. R. 25(a), and the Court's Administrative Order Regarding Electronic Case Filing 6(A) (May 17, 2012), to all registered CM/ECF users.

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